

REMARKS

This Amendment, submitted in response to the Office Action dated November 24, 2003, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

Claims 1-16 are all the claims pending in the application. Claims 3, 11 and 12 have been amended to be consistent with claim 2.

A. Rejections under §102.

Claims 1, 2, 4, 5, 7, 9, 10, 11, and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kano (U.S. Patent No. 5,359,513, hereinafter "Kano"). In order to establish an anticipation rejection under 35 U.S.C. § 102, the reference must teach every element and recitation of the Applicant's claims.

Kano teaches images that are digitized and then subjected to image registration including a nonlinear warping of one of the images so the corresponding locations in the two images will be aligned with each other (see, abstract, Kano). Kano does not teach image processing on the interimage difference image disclosed in the claimed invention. The interimage difference image is the substantial difference between two images and is obtained by subjecting the two images to interimage processing.

In the claimed invention, the substantial difference between the two images is enhanced relative to artifacts caused by the misalignment of the structural positions. By contrast, Kano provides the enhancement of the infiltrate in the patient's right lung after the two images are registered and digitally subtracted (see, col. 13, ln. 25-27, Kano). The subtraction process of

Kano enhances the abnormal regions on the images where the two images are matched with each other on the basis of a non linear warping technique (see, col. 2, ln. 39-43, Kano). Enhancing the infiltrate image in Kano does not fully teach features of the claim where the substantial

difference is enhanced relative to an artifact due to misalignment.

Applicant submits that even a cursory review of Fig. 13C shows a large artifact in the lower left lobe in comparison with the infiltrate of the right lobe. Because the artifact enhancement is so pronounced, it would be difficult for Kano to discern medically significant differences in the presence of artifacts. Because the claim performs enhancement relative to the artifact, the present invention results in a more robust image process. Since every element of independent claims 1 and 10 are not taught by Kano, the Examiner has failed to prove these claims are anticipated by Kano. Therefore, claims 1 and 10 should be allowed and claims 2, 4, 5, 7, 9, 11, and 13 should be allowed by virtue of their dependency on independent claims 1 and 10.

With further regard to claims 2, 4, 11, and 13, the Examiner cites Kano, cols. 9-10 for teaching suppression of artifacts relative to a difference. However, the cited portion merely describes the inter-image process using a local warping. As discussed in connection with Figs. 13A - 13C, the artifacts are not suppressed and may in fact override the substantial difference.

B. Rejections under §103.

Claims 3, 6, 8, 12, and 14-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kano in view of Takeo (U.S. Patent No. 6,169,823, hereinafter "Takeo"). Since claims 3, 6, and 8 depend upon claim 1 and since Takeo does not cure the deficient

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teachings of Kano with respect to claim 1, claims 3, 6, and 8 should be deemed patentable by virtue of their dependency to claim 1.

In addition, to the extent the Examiner relies on Figs. 14A - 14D, these figures relate to analysis for relative density measurements rather than the elements as claimed. Similarly, the discussion at col. 8 also relates to feature structures rather than the claimed elements. Therefore, the Examiner should reconsider the rejection under 35 U.S.C. § 103(a).

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

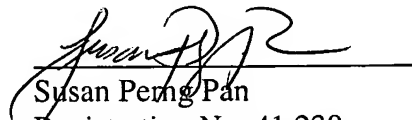
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